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ABSTRACT

The report analyzes data on 119 students attending the Alternative School, a secondary center for emotionally disturbed adolescents in Alachua County, Florida. Data is presented according to general sample characteristics and family background, characteristics of sample prior to entry and after entry (including problems first noticed, intelligence, behavior ratings, and contact with legal authorities), and predictors of success or failure. Eight recommendations are made, including a suggestion for more consistent collection of behavioral and achievement data. (CL)

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ED149559

THE ALTERNATIVE SCHOOL

Alachua County (Florida) Public Schools

An Initial Evaluation of Students in Attendance Prior to June 1977

U.S. DEPARTMENT OF HEALTH EDUCATION & WELFARE NATIONAL INSTITUTE OF EDUCATION

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November 1977

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I. OVERVIEW

The purpose of this report is to describe an initial evaluation of all students having entered Alternative School prior to June 1977. Characteristics of these children prior and subsequent to admission to Alternative School will be described in as much detail as currently available data sources permit. Where appropriate, comments and recommendations will be made.

Full details of the functioning and goals of Alternative School can best be found elsewhere (i.e. The Alternative School: Descriptive Materials Covering the Secondary Center for Emotionally Disturbed Adolescents in Alachua County, Florida). In brief, however, Alternative School provides a structured educational approach for students with severe emotional, social and behavioral disorders in grades 6-12. These students are assigned to Alternative School only after programs in each student's local school (e.g. a resource room for the emotionally disturbed) have proven ineffective. In addition to academic instruction, students are exposed to vocational and physical education as well as interpersonal skills training through individual and group counseling sessions. Classes are small and instruction is individualized as much as possible. Clear consequences are made contingent upon both appropriate and inappropriate behavior.

II. PROCEDURES

Students:

All pupils assigned to Alternative School at any time prior to June 1977 are the subjects of this report. Of 119 total students, 78 were enrolled at Alternative School at the end of the 1976-77 school year. Of the 41 students no longer is attendance, 12 had been sent to a juvenile detention facility, 12 were terminated after extended periods of truant behavior, 1 had been expelled for inappropriate behavior, 14 had been sent to some other vocational or educational setting, and 2 had graduated.

Data Source:

The findings of this report are based entirely on each student's records available at Alternative School or the School Board Office. Since the records available on each student are not of a consistent nature, all data were transcribed on a single form for all students. In order to maximize objectivity, recording was done entirely by an independent member of the evaluation team and not by any teacher, aide or other employee of Alternative School. However, all persons involved both at Alternative School and the School Board Office were both helpful and cooperative during this rather lengthy data collection period. The following content areas were recorded:

1. Subject characteristics - Included sex, race and date of birth of each student.
2. Historical Grade Placement - Included all grades and schools the student had attended with notation as to the type of grade placement (e.g. regular class, ED, MR, SLD) and any teacher comments.

3. Application for Psychological Services - Included dates and reasons for all referrals.
4. IQ Tests - Included all IQ test scores, dates and type of tests administered.
5. Achievement Tests - Included all achievement test scores, dates and type of tests administered.
6. Truancy - Included dates of referrals to attendance officer or other indication of long periods of absenteeism.
7. Suspensions - Included dates and reasons for suspension.
8. Other Behavioral Ratings - Included all checklists on which the child was rated; areas covered were aggressive, destructive behavior, stealing or lying, withdrawn, overly dependent behavior, distractible, hyperactive behavior, poor learning skills, underachieving, anxiety, psychosomatic and excessive physical complaints, perceptual-motor difficulties.
9. Contact with Legal Authorities - Included dates, legal authority contacted and reason for the contact.
10. Other Psychological Treatment - Included agencies outside of school offering psychological assistance to the child, dates services were offered and relevant comments.
11. Family Background - Included marital and living status of parents and who was primarily or legally responsible for the child.
12. Placement at Alternative School - Included entrance date, age and grade; if child had left Alternative School the date and reason for termination was also noted.

Data Analyses:

For the purpose of data analysis each child's record was placed on computer cards and the Statistical Analysis System by Barr, Goodnight, Sall and Helwig (1976) was used. An extensive analysis of the characteristics of the sample prior and subsequent to their entry at Alternative School was carried out. Where possible, analyses of performance pre-and post-placement at Alternative School were made. An attempt was also made to assess the characteristics of those students who have been either successful or unsuccessful at Alternative School.

Missing Data:

Not all children had data available on all content areas of interest. In fact, there was a good deal of variability as to what was available on any given child. Consequently, each data analysis included only those children on whom there was sufficient data, with a notation as to how many of the total sample had data missing.

III. GENERAL SAMPLE CHARACTERISTICS and FAMILY BACKGROUND

General Sample Characteristics:

Students admitted to Alternative School enter in fairly even numbers across grades 6 through 10 with very few children admitted in grades 11 and 12 (see Table 1). There is a preponderance of boys admitted over girls (76.5% vs. 23.5%) and slightly more black students enter than white (58.6% vs. 41.4%). As would be expected, the students' ages at entry range from 11-17 years and are generally distributed evenly from 11 to 16 years; a 17 year old's entry is relatively rare (see Table 2).

Table 1
NUMBER OF STUDENTS ENTERING ALTERNATIVE SCHOOL BY GRADE

Grade	Frequency	Percent
6	19	15.966
7	19	15.966
8	29	24.370
9	24	20.168
10	20	16.807
11	7	5.882
12	1	0.840

Table 2
NUMBER OF STUDENTS ENTERING ALTERNATIVE SCHOOL BY AGE

Age	Frequency	Percent
11	13	10.924
12	14	11.765
13	20	16.807
14	21	17.647
15	32	26.891
16	16	13.445
17	3	2.521

Family Background:

Parents of students entering Alternative School were classified as married, divorced, single or widowed. In addition, whether the parents were living together or apart was recorded as well as who (mother, father, both parents, other persons or agencies) was legally responsible for the child. Over half of the sample (57.8%) had parents who were married, 37.5% had parents who were divorced and the remaining 4.6% had a parent who was either single or widowed. In terms of actual parental living arrangements, however, the sample was split exactly in half as to whether parents lived together or apart. In other words, a certain percentage of parents classified as married actually lived apart. Not quite half (47.2%) of the sample had both parents legally responsible for them, 28.1% had only their mother as their legal guardian, 21.3% has some other person or agency responsible and only 3.4% had their father as the primary person responsible.

Further analysis of this data by sex and race found no major differences due to sex. However, significantly more white children did have their parents living together than black children (64.9% vs. 35.1%; $x^2=5.64$, df 1, $p < .025$; see Table 3).

Table 3
LIVING STATUS OF PARENTS BY RACE

	Together	Apart
Black	39.2%	60.8%
White	64.9%	35.1%

(N=88)

Similarly, there was a tendency for more mothers of black students to be solely responsible for their children than was the case for mothers of white children (35.4% vs. 18.0%). And, as would be expected, both parents of white students were more often responsible for their child than were both parents of black children (56.4% vs. 41.7%), see Table 4 ($x^2=7.30$, df 3, $p < .10$).

Table 4
PRIMARY ADULT RESPONSIBLE BY RACE

	Mother Alone	Father Alone	Both Parents	Other Person/ Agency
Black	35.4%	00.0%	41.7%	22.9%
White	18.0%	7.7%	56.4%	17.9%

(N=87)

IV. CHARACTERISTICS OF THE SAMPLE PRIOR TO ENTRY AT ALTERNATIVE SCHOOL

Grade Problems First Noticed:

For this analysis teacher comments were recorded over the course of the child's schooling. The grade at which a "problem" was first noticed was recorded and the problem was classified as (1) emotional, (2) behavioral, (3) achievement or (4) multiple (some combination of emotional, behavior and/or achievement). Over 75% of these children had been identified as "problems" during or prior to the third grade (see Table 5). Still, examination of the data suggests that very little was done about these identified children until much later points in time. At the end of the third grade, for example, only 32% of our total sample had at some time been referred for psychological services (see Table 6). Only 11% had entered some type of special education class (see Table 7). Similarly, while over 75% of this sample had been identified as "problems" during or prior to the third grade, it is not until the seventh grade that the same percentage of our sample (75%) have received referrals for psychological assistance (see Table 6). It is not until the eighthgrade that this percentage has entered special education (see Table 7) and it is not until the ninth grade that 75% of our sample has been admitted to Alternative School (see Table 1). In other words, a great preportion of students ultimately entering Alternative School showed noticable problems early in their involvement in school settings. This was true whether the child was male or female, black or white (see Table 8).

Table 5
GRADE PROBLEM WAS FIRST NOTICED*

Grade	Frequency	Percent	Cum Percent
K	19	17.273	17.273
1	30	27.273	44.545
2	22	20.000	64.545
3	12	10.909	75.455
4 or higher	27	24.545	100.000

* Data on 9 subjects is missing

Table 6
GRADE OF FIRST REFERRAL FOR PSYCHOLOGICAL SERVICES*

Grade	Frequency	Percent	Cum Percent
K	6	5.660	5.660
1	8	7.547	13.208
2	10	9.434	22.642
3	10	9.434	32.075
4	13	12.264	44.340
5	15	14.151	58.491
6	9	8.491	66.981
7	12	11.321	78.302
8	10	9.434	87.736

Table 6 (continued)
GRADE OF FIRST REFERRAL FOR PSYCHOLOGICAL SERVICES*

Grade	Frequency	Percent	Cum Percent
9	11	10.377	98.113
10	1	0.943	99.057
11	1	0.943	100.000

* Data on 13 subjects is missing

Table 7
GRADE FIRST PLACED IN SPECIAL EDUCATION*

Grade	Frequency	Percent	Cum Percent
1	1	0.935	0.935
2	2	1.869	2.804
3	9	8.411	11.215
4	11	10.280	21.495
5	17	15.888	37.383
6	18	16.822	54.206
7	14	13.084	67.290
8	21	19.626	86.916
9	11	10.280	97.196
10	2	1.869	99.065
11	1	0.935	100.000

* Data on 12 subjects is missing

Table 8
GRADE PROBLEM WAS FIRST NOTICED BY SEX AND RACE

Grade	Males	Females	Black	White
K-3	75.0%	76.9%	76.1%	73.2%
4 and up	25.0%	23.1%	23.9%	26.8%

Teachers who noticed these problems, however, were clearly reluctant to act on their concerns either in terms of referral for psychological services or placement outside of the regular class. Such reluctance may have stemmed from expectations that the child would somehow "outgrow" his problems or that labeling the child through referral, etc. would lead to a kind of self-fulfilling prophecy.

Further data analysis suggested that how early a child was identified as a problem was somewhat related to the marital status of that student's parents; children of divorced parents seem to be noted as problems earlier than children of married parents ($\chi^2=7.91$, $df=4$, $p < .10$), see Table 9. It should be noted that the marital status of the child's parents was determined at the time of his entry to Alternative School, not during his elementary school years.

Table 9
GRADE PROBLEM FIRST NOTICED BY MARITAL STATUS OF PARENTS

Grade	Married	Divorced
K	11.1%	26.1%
1	27.8%	34.8%
2	27.8%	13.0%
3	5.6%	17.4%
4 or up	27.8%	8.7%

(N=59)

Type of Problem First Noticed:

As mentioned previously, when a child was initially identified as having problems, a notation was made as to the problem type. These types were then coded as primarily emotional (e.g. withdrawn, anxious), behavioral (e.g. aggressive, acting-out), achievement, or multiple (e.g. underachieving and disruptive) As can be seen in Table 10, emotional problems were the least common and multiple problems occurred the most often. This was true for both boys and girls and black and white students.

Table 10
TYPE OF PROBLEM FIRST NOTICED

Problem Type	Frequency	Percent
Emotional	10	9.009
Behavioral	26	23.423
Achievement	22	19.820
Multiple	53	47.748

(N=111)

There was some indication that the type of problem first noticed was related to the marital status of the student's parents (x^2=7.44, df 3, p<.10). Children of divorced parents more often had emotional and achievement problems while children of married parents accounted for most of the aggressive and multiple problems, see Table 11. Again, it should be noted that the marital status of the child's parents was determined at the time the child entered Alternative School and not during elementary school, when the child's problems were usually initially identified.

Table 11
PROBLEM TYPE BY PARENT'S MARITAL STATUS

Problem Type	Married	Divorced
Emotional	5.7%	25.00%
Behavioral	25.7%	12.5%
Achievement	20.0%	33.3%
Multiple	48.6%	29.2%
Total	100.00%	100.00%

(N=61)

Initial Special Class Placement:

As was noted previously, placement in some sort of special education class did not usually occur until some time after the child's problems were first identified. However, when placement did occur it was most often in a class for the emotionally disturbed (see Table 12).

Table 12
INITIAL SPECIAL CLASS PLACEMENT*

Class Type	Frequency	Percent
ED	73	68.9%
MR	20	18.9%
SLD	13	12.2%

*Data on 13 subjects is missing

Intelligence:

All intelligence test scores for each child prior to entry at Alternative School were recorded. An average IQ score was calculated by summing all IQ scores per child and dividing by the total number of IQ tests the child had been given. These average scores ranged from an IQ of 51 to an IQ of 131, with a mean IQ of 83.3. There were no significant differences between boys and girls ($\bar{x}$=83.8 for boys and $\bar{x}$=81.7 for girls) but white students scored significantly higher than black students ($\bar{x}$=90.9 for whites, $\bar{x}$=77.5 for blacks; t=6.29, v=110, $p < .001$). The marital status of the child's parents was unrelated to his IQ.

A second analysis was performed in which the child's last IQ score prior to entry at Alternative School was compared to his first IQ score. There was an average of 3.54 years between the first and last scores, with the last IQ score ($\bar{x}$=79.4) an average of 6.28 points below the first IQ score ($\bar{x}$=86.5). This drop in scores was true for both males and females and black and white students. There was some indication that black students' scores fell more than white students' (mean drop for blacks was 7.88 points vs. 3.59 points for whites), but this difference was not significant. The marital status of the child's parents was unrelated to any change in his/her IQ.

Achievement:

Any achievement test given to any child in the sample prior to his admission to Alternative School was recorded. Since different tests were given at different times, grade equivalent scores were used to make the data comparable. Tests of reading and math achievement were the most frequently administered. Tests of other subject matter (e.g. readiness, social studies, spelling) were so sporadically administered they were dropped from analysis.

Since children varied in the total number of tests they took over the course of their schooling, two approaches to data analysis were taken. Both approaches led to generally comparable results. The first approach involved using the last

achievement test a child was given prior to his entry at Alternative School as the "best estimate" of his performance. This grade equivalent score was divided by the grade he was in at the time of testing to arrive at an estimate of his achievement gain per grade. Because over 24% of the sample had repeated a grade prior to entering Alternative School, this score was also divided by the child's age at the time of testing minus 5 to arrive at an estimate of the child's performance gains per school year. This data for both reading and math for the entire sample is presented in Table 13.

Table 13
AVERAGE ACHIEVEMENT GAINS PER GRADE AND PER YEAR*

Reading	Per Grade	.56 grades (N=103)
Reading	Per Year	.52 grades (N=103)
Math	Per Grade	.62 grades (N=103)
Math	Per Year	.58 grades (N=103)

* Data based on last achievement test given prior to entry at Alternative School

The second approach was simply to make the same estimates of gains per grade and per school year described above for each test a child was given. These estimates were then summed and divided by the total number of tests the child received, leading to an average gain score per grade and per school year. This data for reading and math is presented in Table 14.

Table 14
ACHIEVEMENT GAINS PER GRADE AND PER YEAR*

Reading	Per Grade	.57 grades (N=99)
Reading	Per Year	.53 grades (N=99)
Math	Per Grade	.59 grades (N=101)
Math	Per Year	.56 grades (N=101)

*Data based on all achievement tests given prior to entry at Alternative School

Both sets of data suggest that children who ultimately attend Alternative School have serious achievement deficits, progessing at a rate of only one-half of a year per year in school. This is true for both reading and math although reading gains seem to be slightly lower than math gains. This means, of course, that the average child entering the sixth grade at Alternative School could be expected to perform at only the third grade level.

When the data is further analyzed by sex and race, there were no significant differences due to sex. However, white-black differences were significant for both reading and math per grade (x^2=11.08, df 3, $p < .025$; x^2=11.00, df 3, $p < .025$) and for reading per year (x^2=11.97, df 3, $p < .01$) (see Table 15). An interesting finding was that children of divorced parents were never found in the lowest quartile of the sample's achievement gains prior to entry at Alternative School (x^2=7.9, df 3, $p < .05$), see Table 16.

Table 15
ACHIEVEMENT GAINS BY SEX AND RACE*

	Girls	Boys	White	Black
Reading: Per Grade	.63 grades	.55 grades	.67 grades	.47 grades
Reading: Per Year	.56 grades	.52 grades	.60 grades	.46 grades
Math: Per Grade	.58 grades	.60 grades	.69 grades	.51 grades
Math: Per Year	.53 grades	.57 grades	.62 grades	.50 grades

*Data based on all achievement tests given prior to entry at Alternative School

Table 16
READING ACHIEVEMENT AS RELATED TO PARENTAL MARITAL STATUS

	Married	Divorced	
Lowest Quartile	24.3%	0.0%	
2nd	18.2%	36.4%	
3rd	24.2%	36.3%	
Highest Quartile	33.3%	27.3%	
Total	100%	100.00%	(N=55)

Overall, these data suggest that the achievement level of students entering Alternative School varies somewhat depending upon both the race of the child, and the marital status of his parents. However, despite these factors, most students show serious deficits in both math and reading skills upon admission.

Behavior Ratings:

For some students behavior checklists were used sometime by the child's teacher prior to his/her entry at Alternative School. These ratings were recorded and classified as indicative of disturbance in the following areas: (1) aggression, (2) stealing, lying, (3) withdrawn, shy, (4) distractable, (5) underachieving, does not complete work, (6) anxious, psychosomatic conerns. Forty-five students had such records; see Table 17.

Table 17
FREQUENCY OF DIFFERENT BEHAVIOR PROBLEMS BY TEACHER RATINGS PRIOR TO ENTRY AT ALTERNATIVE SCHOOL

Behavior	Frequency	Percent	
Aggressive	35	77.8%	
Steals/Lies	0	00.0%	
Withdrawn	13	28.9%	
Distractable	36	80.0%	
Underachievement	5	11.1%	
Anxious/Psychosomatic	18	40.0%	(N=45)

For this sample of students, both aggressive and distractible behavior were the most common problems noted with some 80% of the students rated as disturbed in these areas. Anxiety or psychosomatic concerns were also relatively frequently checked (40% of the sample). Similar to the data presented previously as to the types of problems first noticed in these children, shy, withdrawn behavior was much less often noted than agressive or acting-out behavior. It may be that withdrawn behavior is indeed a relatively infrequent problem among school age children. Or, perhaps the withdrawn child is not as often classified by his teacher as a "problem" since he does not have a disruptive influence on the classroom's total functioning.

Of the children rated, most received checks in more than one category (mean=2.78 problems out of 6 problem areas) indicating that these students problems tended to be multiple in nature.

The sex and race of the student and the marital status of his/her parents were generally unrelated to what behaviors or how many problem areas were checked. However, there was some indication that more females were classified as having withdrawn shy behavior than males (55.6% of females were so classified versus 22.2% of males, $x^2=3.894$, df=1, $p < .05$). This data is in keeping with the general literature on psychopathology in children (e.g. Quay and Werry's Psychopathological Disorders of Childhood, 1972, pp 17-19).

Truancy:

Some 43% of the sample had been noted as truant prior to entering Alternative School. And, 45% of these children had been truant on 3 or more occasions. Truancy was not related to race but significantly more females had been truant than males ($x^2=6.87$, df 1, $p < .01$), see Table 18.

Table 18
TRUANCY AS RELATED TO THE SEX AND RACE OF THE STUDENT

Truant?	White	Black	Males	Females
no	64.6%	51.5%	63.7%	35.7%
yes	35.4%	48.5%	36.3%	64.3%

There was some tendency for truancy to be related to family background; with more children of parents living apart having excessive unexcused absences ($x^2=3.3$, df 1, $p < .10$); see Table 19.

Table 19
TRUANCY AS RELATED TO FAMILY BACKGROUND

Truant?	Parents living together	Parents living apart	
no	63.6%	44.4%	
yes	36.4%	55.6%	(N=89)

Suspensions:

Well over half - 63.9% - of the sample had been suspended at least once prior to entering Alternative School. Of these students, over a third (35.5%) had been suspended three or more times.

The majority of these suspensions occurred in grades 6-8 (61.3%) and ages 11-14 (74.9%). Suspensions were generally unrelated to sex although slightly more girls (71.4%) were suspended than boys (61.5%). This variable however, was significantly related to race (see Table 20). Not only were more black children (76.5%) suspended than white children (45.8%) but they were also suspended more often (x^2=16.5, df 3, $p < .001$).

Table 20
SUSPENSIONS AS RELATED TO THE RACE OF THE STUDENT

No. of Suspensions	White	Black	
None	54.2%	23.5%	
1	27.1%	23.5%	
2	10.4%	20.6%	
3 or more	8.3%	32.4%	(N=116)
	100.00	100.00	

Marital status was also somewhat related to suspensions; more children of divorced parents were suspended and they tended to be suspended more often (x^2=8.77, df 3, $p < .05$); see Table 21.

Table 21
NUMBER OF SUSPENSIONS BY MARITAL STATUS OF PARENTS

No. of Suspensions	Married	Divorced	
None	43.3%	25.0%	
1	29.7%	16.7%	
2	8.1%	37.5%	
3 or more	18.9%	20.8%	(N=61)
	100.00	100.00	

Contact with Legal Authorities:

Any contact with legal authorities prior to entering Alternative School was noted. Some 41% of the students had this contact. Students varied in terms of the grade and age at which they became first identified by a legal agency. However, grades 7-9 and ages 13-15 had the highest frequency of identified children (see Tables 22 and 23). The reasons for the initial legal involvement were also varied; the most common reasons being truancy (30.4%) and assault (26.1%) (see Table 24). In almost all cases (89.8%), however, the legal agency involved was the Division of Youth Services.

Table 22
GRADE OF FIRST CONTACT WITH LEGAL AUTHORITIES

Grade	Frequency	Percent
4	1	2.04
5	0	0.00
6	6	12.25
7	14	28.57
8	7	14.29
9	12	24.49
10	6	12.24
11	3	6.12
Total	49	100.00

Table 23
AGE OF FIRST CONTACT WITH LEGAL AUTHORITIES

Age	Frequency	Percent
10	2	4.08
11	4	8.16
12	6	12.25
13	9	18.37
14	12	24.49
15	11	22.45
16	3	6.12
17	1	2.04
18	1	2.04
Total	49	100.00

Table 24
REASON FOR FIRST CONTACT WITH LEGAL AUTHORITIES

Reason	Frequency	Percent
Truancy	14	30.43
Assault	12	26.09
Other Criminal Acts	4	8.70
Ungovernable	5	10.87
Runaway	3	6.52
Child Abuse	3	6.52
Other Unusual Behavior	5	10.87
Total	46	100.00

There were no differences as to the number of legal contacts with regard to the sex or race of the student. However, significantly more students of divorced parents had such contacts than students of married parents ($x^2=6.871$, df 1, $p < .01$); see Table 25.

Table 25
PERCENT OF STUDENTS HAVING CONTACTS WITH LEGAL AUTHORITIES BY THE MARITAL STATUS OF THEIR PARENTS

Legal Contact?	Parents Married	Parents Divorced
no	67.6%	33.3%
yes	32.4%	66.7% (N=61)

Psychological Treatment:

Psychological or psychiatric treatment outside of the assistance offered by the school itself was noted. Almost all students (85.7%) had received such treatment prior to entering Alternative School. But, only 3.4% of the sample had ever been hospitalized for psychiatric reasons. There were no differences between males and females or between black and white students in either the age or grade this treatment was initiated. However, there was some data to suggest that more children of parents living apart had outside psychological treatment initiated at an earlier age; see Table 26, ($x^2=2.768$, df 1, $p < .10$). Perhaps parents who are living apart initiate such treatment for their children at an earlier age or perhaps children of such parents have problems earlier and thereby require earlier psychological intervention. This latter hypothesis receives some support from the data presented as to when the child's problems were first noticed. Recall that children of divorced parents often had problems identified earlier than children of married parents.

Table 26
AGE OF CHILD'S INITIAL OUTSIDE PSYCHOLOGICAL TREATMENT AS RELATED TO THE LIVING ARRANGEMENT OF HIS PARENTS

Age	Parents Living Together	Parents Living Apart
5-10 years	41.03%	59.52%
11 years and older	58.97%	40.48%
Total	100.00	100.00

V. CHARACTERISTICS OF THE SAMPLE AFTER ENTRY AT ALTERNATIVE SCHOOL

Intelligence:

So few students (n=10) had received intelligence testing after admission to Alternative School that no further analyses were carried out.

Achievement:

All achievement tests given to the student after his admission to Alternative School were analyzed. An average achievement gain score was computed by taking the average of each student's test to test performance, with the number of months between tests taken into consideration. This analysis yielded an average achievement gain score per year for each student based on all tests given. To keep the results comparable, the gain score is equivalent to the number of grade levels per year each child was completing. Of course, for this score to be computed, a student had to have taken at least two achievement tests since entry. This reduced the sample size considerably to only 10-31 students, depending on the academic subject tested. This data is presented in Table 27.

Table 27
ACHIEVEMENT GAINS SINCE ENTRY*

Subject	Average Gain in Grade Level Per Year	
Word Rec.	1.57	(N=25)
Reading Comp.	1.70	(N=23)
Total Reading	1.25	(N=30)
Math	3.43	(N=31)
General Information	2.05	(N=10)

*All achievement scores are based on the PIAT

Further analyses by sex and race are presented in Tables 28 and 29. Although girls generally did better than boys in reading and boys did better than girls in math, the only significant difference between sexes occurred on the total reading measure ($t=2.22$, $v=28$, $p < .025$).

Table 28
ACHIEVEMENT GAINS SINCE ENTRY BY SEX

Subject	Boys	Girls	
Word Rec.	1.32	2.22	(ns)
Reading Comp.	1.15	2.95	(ns)
Total Reading	.55	3.53	($p < .025$)
Math	3.95	1.65	(ns)

Table 29
ACHIEVEMENT GAINS SINCE ENTRY BY RACE

Subject	White	Black
Word Rec.	2.05	1.13
Reading Comp.	2.30	1.28
Total Reading	1.34	1.18
Math	2.66	4.06

For race, white students consistently performed better than black students. However, with this small sample size, none of these differences were statistically significant.

Overall, while greater gains were made in math than in reading, progress in both subjects was clearly greater than the .53-.59 year gains these students had averaged prior to entry (see previous discussion of achievement gains prior to admission to Alternative School). It should be noted, however, that these gains are based on a small sample of all students who have attended Alternative School. It is possible of course, that students who have been tested at least twice are also the students who have attended Alternative School the longest, i.e. were the more successful students. If so, these data may overestimate to a certain extent the achievement gains of all students who have been in attendance. Consequently, this data was further analyzed as to whether the student was currently attending Alternative School or was no longer attending due to successful completion or early termination. All students in the sample except one were currently attending. This might suggest that failures terminated so quickly from the program that two achievement test sessions were never administered. Successes, however, may have completed the program before repeated testing was consistently adopted by the School.

Although only a few students had been tested twice or more since entering, over sixty students had received at least one achievement test. Further, this first achievement testing occurred, on the average, 6.75 mos. after the child had entered. Therefore, to get some estimate of the student's gains from entry to the first achievement testing, an expected score was calculated for reading and math at the point of entry. This score was based on the average gains the child had made per year on all previous achievement tests for reading or math (see section on achievement scores prior to entry at Alternative School) and his age at entry. Table 30 presents this data. Also presented is the grade level at which the child performed at first testing and an average achievement gain score. This score is based on the differences between the expected score at entry and the students actual performance at first testing, taking into consideration the number of months between entry and first testing. Again, for comparison purposes, this score is equivalent to the number of grade levels gained per year.

Table 30
ACHIEVEMENT GAINS AFTER ADMISSION BASED ON EXPECTED GRADE LEVEL AT ENTRY

Grade Level Expected at Entry	Grade Level of First Achievement Test Score	No. of Grade Levels Gained Per Year
Reading: 4.54	Word Rec: 4.42	none
	Read Comp: 4.55	none
	Total Read: 4.48	none
Math: 4.73	Math: 5.03	.61

Note that the expected score in math at entry is slightly higher than reading but both are at the fourth grade level. After an average of almost 7 months at Alternative School, however, no gains have been made in reading and small gains have been made in math. It is difficult to say what exactly may be going on here. Perhaps it takes students 6-7 months to "settle-in" to the school's procedures and only after that do they make the substantial gains our previous data analysis suggested. (Recall that our previous analysis were based on multiple testings which typically occurred more than 6-7 months after the student entered Alternative School.) It is also possible that our expected grade level scores are an overestimate of how the student would actually perform at that time. This would be true, for example, if the student had shown a deterioration over time in the achievement gains per year he made. In this case, an average achievement gain score, might actually overestimate the child's performance at the point of entry. Should this occur, any actual gains the student made since placement would be wiped-out or substantially underestimated. Regardless of which hypothesis may be correct, however, it is clear that students make greater gains at Alternative School in math than they do in reading.

Further analyses for sex and race, for both reading and math are provided in Tables 31 through 34.

Table 31
READING GAINS AFTER ADMISSION BASED ON EXPECTED GRADE LEVEL AT ENTRY/BY SEX

Sex	Expected Entry Grade Level	Grade Level on First Achievement Test	Grade Levels Gained Per Year
Boys	4.38	4.24 (Word Rec)	none
		4.39 (Read Comp)	none
		4.32 (Total Read)	none
Girls	5.01	5.12 (Word Rec)	none
		5.12 (Read Comp)	none
		5.12 (Total Read)	none

Table 32
MATH GAINS AFTER ADMISSION BASED ON EXPECTED GRADE LEVEL AT ENTRY/BY SEX

Sex	Expected Entry Grade Level	Grade Level on First Achievement Test	Grade Levels Gained Per Year
Boys	4.72	4.94	.16
Girls	4.74	5.41	2.32

Table 33
READING GAINS AFTER ADMISSION BASED ON EXPECTED GRADE LEVEL AT ENTRY/BY RACE

Race	Expected Entry Grade Level	Grade Level on First Achievement Test	Grade Levels Gained Per Year
White	5.40**	5.39** (Word Rec)	.72
		5.49** (Read Comp)	none
		5.16* (Total Read)	.10
Black	3.8**	3.22** (Word Rec)	none
		3.39** (Read Comp)	none
		3.60* (Total Read)	none

** $p < .001$, * $p < .025$

Table 34
MATH GAINS AFTER ADMISSION BASED ON EXPECTED GRADE LEVEL AT ENTRY/BY RACE

Race	Expected Entry Grade Level	Grade Level on First Achievement Test	Grade Levels Gained Per Year
White	5.51**	5.85**	.90
Black	4.11**	3.97**	.27

** $p < .001$

As might be expected, girls not only had higher expected reading scores at entry but also performed better on the first achievement test administered. On this measure, however, neither group made any substantive improvement during their initial months at Alternative School. In math, girls and boys had very similar expected grade level scores at entry. Girls, however, performed slightly better at first testing and therefore showed larger grade level gains per year. None of these differences, however, were statistically significant.

Similar to previous findings, black students had significantly lower expected scores than white students in both reading, ($t=3.96$, $v=93$, $p < .001$) and math ($t=3.335$, $v=94$, $p < .001$). They also performed more poorly on the first achievement test administered after entry. These differences were statistically significant for all three reading measures (for Word Recognition, $t=3.704$, $v=59$, $p < .001$; for Reading Comprehension, $t=3.446$, $v=56$, $p < .001$; for Total Reading, $t=2.637$, $v=63$, $p < .025$) and for the math measure as well ($t=3.808$, $v=64$, $p < .001$). Neither group showed substantial achievement gains in reading or math but where gains did occur they were clearly greater for white students.

In sum, the achievement data of a small sample of students who have been tested at least twice since entry strongly suggests that substantial achievement gains were made at Alternative School. However, other data using an expected achievement score at entry indicates that few if any gains were made between the time of admission and the first achievement test administration, some 6 or 7 months later. There is no simple way to handle these two somewhat discrepant findings. As was noted previously, the expected entry score may have been an overestimate of the student's actual capabilities, it may take students 6-7 months to "settle in" after which their academic progress shows a rapid increase, or students who have been tested twice may not be a representative sample of all students attending Alternative School. Clearly, in order to assess what achievement gains are actually made at Alternative School, students should be tested at entry and thereafter at consistent intervals.

Behavior Ratings:

Seventy-six students were rated on the Devereux Adolescent Behavior Rating Scale by their teachers some time after entry. This Scale provides a score for each child on a number of behavioral, emotional and cognitive factors. Using available norms the student can then be classified as deviant or non-deviant on each of the factor scores. This data is presented in Table 35.

Table 35
PERCENT OF STUDENTS SCORING IN THE DEVIANT RANGE OF THE DEVEREUX

Behavior Factors	Percent of Students with Deviant Scores	
1. Unethical	31.6	
2. Defiant/Resistant	14.5	
3. Domineering/Sadistic	39.5	
4. Heterosexual Interest	22.4	
5. Hyperactivity	27.6	
6. Poor Emotional Control	40.8	
7. Needs Approval/Dependency	23.7	
8. Emotional Distance	21.1	
9. Physical Inferiority/Timidity	27.6	
10. Schizoid Withdrawal	17.1	
11. Bizarre Speech and Cognition	30.3	
12. Bizarre Action	30.3	
13. Inability to Delay	27.6	
14. Paranoid Thinking	28.9	
15. Anxious Self-Blame	19.7	(N=76)

Over a third of the sample had deviant scores in the areas of poor emotional control, and domineering, sadistic behavior. Another 20-30% of the sample were deviant in the areas of unethical behavior, bizarre speech or actions, paranoid thinking, hyperactive behavior, physical inferiority, dependency, inappropriate sexual behavior, emotional distance and anxiety. In addition, the mean number of deviant scores per child was 4.03 out of a possible 15; see Table 36. In other words, not only did these students show a wide variety of deviant behavior

but most engaged in several types of inappropriate response patterns.

Table 36
FREQUENCY OF STUDENTS HAVING 0-14 DEVIANT SCORES ON THE DEVEREUX

No. of Deviant Scores	Frequency	Percent
0	10	13.2
1	10	13.2
2	11	14.5
3	8	10.5
4	8	10.5
5	7	9.2
6	3	3.9
7	7	9.2
8	4	5.3
9	4	5.3
11	2	2.6
12	1	1.3
14	1	1.3
Total	76	100.0

Further analyses of this data indicated that the only factor for which there was a significant difference between males and females was Factor 4: Heterosexual Interest (see Table 37). In this case girls were more deviant than boys (x^2=8.006, df 1, $p < .01$). This suggest that girls actually engage in more inappropriate sexual behavior than boys or that sexual behavior is often seen by teachers as more deviant if it occurs in adolescent females than if it occurs in adolescent males.

Table 37
PERCENT OF BOYS AND GIRLS WITH DEVIANT SCORES ON FACTOR 4 (HETEROSEXUAL INTEREST)

Deviant?	Boys	Girls
no	85.71	55.00
yes	14.29	45.00
Total	100.00	100.00

Significant differences due to race occurred on only two factors: Factor 9 (Physical Inferiority/Timidity) and Factor 10 (Schizoid Withdrawal). For both factors, white students were rated as deviant more often than black students (x^2=5.645, df 1, $p < .025$ for Factor 9; x^2=6.571, df 1, $p < .025$ for Factor 10), see Tables 38 and 39.

Table 38
PERCENT OF BLACK AND WHITE STUDENTS WITH DEVIANT SCORES ON FACTOR 9 (PHYSICAL INFERIORITY/TIMIDITY)

Deviant?	White	Black
no	58.82%	83.33%
yes	41.18%	16.67%
Total	100.00%	100.00%

Table 39
PERCENT OF BLACK AND WHITE STUDENTS WITH DEVIANT SCORES ON FACTOR 10 (SCHIZOID WITHDRAWAL)

Deviant?	White	Black
no	70.59%	92.86%
yes	29.41%	7.14%
Total	100.00%	100.00%

In terms of the total number of deviant scores a child had, there were no significant differences due to the sex or race of the child. Similarly, the marital status of the student's parents was unrelated to number of deviant scores any student might receive.

In order to assess whether students make behavioral gains while attending Alternative School a smaller sample of students (n=16), who had been rated on the Devereux at least twice, was used. For this analyses the total number of deviant scores per child was employed as the dependent measure. Seventy-five percent of these students improved on their second behavioral ratings, with the number of deviant scores decreasing from a mean of 5.38 to 3.00. Furthermore, while no child had zero deviant scores on his first rating, four children or 25% of the sample, had no deviant scores on their second ratings. A single factor repeated measures analysis of this data was statistically significant ($F=5.02$, df 1, 15, $p < .05$).

Truancy:

Truancy continued to be a problem for some students after entering Alternative School. As was noted previously, 12 students (10.1%) were terminated due to lengthy periods of absenteeism often the student was of legal age and 21% of the students were referred to some legal agency because of this problem. It should be noted, however, that 43% of the sample had been truant prior to entering Alternative School. The fact that clearly fewer than 43% of the sample were truant after entry might indicate improvement for at least some students in this problem area. However, this data should be viewed with caution since the time periods prior to and after admission were not equal (e.g. simply because there was more time prior to entry the student would have had more opportunity to be truant).

Suspensions:

The records indicate that suspensions were relatively rare at Alternative School with only 6 students suspended out of a sample of 119.

Contact With Legal Authorities:

Any contact with legal authorities after the student entered Alternative School was recorded. Approximately 42% of the sample had a record of such contacts. The reasons for these contacts were varied but the most common problems were truancy (50.0%) and assault (18.0%); see Table 40. In 91.8% of the cases the legal agency involved was the Division of Youth Services.

Table 40
REASONS FOR CONTACT WITH LEGAL AUTHORITIES AFTER ENTERING ALTERNATIVE SCHOOL

Reasons	Frequency	Percent
Truancy	25	50.00%
Assault	9	18.00%
Other Criminal Acts	5	10.00%
Breaking Probation	2	4.00%
Ungovernability	6	12.00%
Runaway	0	0.00%
Other Unusual Behavior	0	0.00%
Child Abuse	3	6.00%
Total	50	100.00%

Comparison of Table 40 with Table 24 indicates that about the same number of students were involved with the legal system before and after entry at Alternative School. However, truancy was more often the reason for legal involvement after admission and assault was somewhat less often a factor. This is not to say that students were more truant after they started attending Alternative School. In fact, some 43% of the entire sample had been truant prior to entry but, obviously, not all of these students came to the attention of some legal authority. Perhaps after entering Alternative School, legal agencies were more often contacted in an attempt to deal with what had been a long standing problem for many of these students. Prior to entry, other attempts at handling the problem (e.g. applications for admission to Alternative School) may have been more frequently used.

As was the case prior to admission, the sex and race of the student were unrelated to the number of contacts.

In addition, however, the marital status of the student's parents was also unrelated to the number of legal contacts he or she had after admission. The sex, race and parental marital status of the child were not assessed with regard to the reasons for these contacts as the sample size was too small.

Table 41
FOLLOW-UP DATA ON ELEVEN STUDENTS SUCCESSFULLY TERMINATED FROM ALTERNATIVE SCHOOL

Student	Time at Alternative School	Present Program	Achievement	Truancy	Suspension	Juvenile Charges	No. of Deviant Devereux Scores
#1	6 months	High School; Vo-Tech	average grades	?	?	no	0
#2	6 months	8th grade; Ed resource	poor grades	yes	yes	no	3
#3	10 months	High School	average grades	no	no	no	0
#4	14 months	Graduated from Adult Ed.	average grades	?	no	no	?
#5	3 months	High School	grade level test scores	no	no	no	0
#6	6 months	High School	grade level in math; poor in reading	?	yes	?	0
#7	?	7th Grade: Ed resource	grade level in math; poor in reading	no	no	no	0
#8	12 months	High School; Vo-Tech	average grades	?	no	no	0
#9	10 months	High School; Ed resource	poor test performance	no	no	no	0
#10	3 months	Adult Ed	?	?	?	no	?
#11	6 months	High School; Vo-Tech	very poor	?	no	no	?

? data unavailable

VI. PREDICTORS OF SUCCESS OR FAILURE

An attempt was made to assess what factors, if any, might predict a student's success or failure at Alternative School. For this analysis, students were classfied as actives (currently attending), successes (graduated or returned to other educational or vocational settings), or failures (sent to juvenile detention centers, terminated for truancy or behavior problems). Of the available sample, 78 were considered actives, 16 successes and 25 failures.

There were a number of significant differences between actives and students who had terminated either successfully or unsuccessfully from Alternative School. Active students, for example, clearly entered the program earlier than those who had terminated (x^2=43.1, df 12, $p < .001$); see Table 42. Similarly, terminated students fell significantly more often into the lowest quartile in achievement prior to entering Alternative School, (x^2=15.4, df 6, $p < .025$, for reading; for math, x^2=33.7, df 6, $p < .001$); see Tables 43 and 44.

Table 42
GRADE ENTERED ALTERNATIVE SCHOOL BY ACTIVES, SUCCESSES AND FAILURES

Grades	Actives	Successes	Failures	
6-8	75.6%	12.5%	24.0%	
9-10	21.8%	81.2%	56.0%	
11-12	2.6%	6.3%	20.0%	(N=119)
Total	100.00%	100.00%	100.00%	

Table 43
PERCENT OF ACTIVES, SUCCESSES AND FAILURES FALLING INTO PRE-ALTERNATIVE SCHOOL READING ACHIEVEMENT QUARTILES

Reading Achievement	Actives	Successes	Failures	
Lowest Quartile	14.9%	50.00%	44.4%	
2nd Quartile	25.4%	21.4 %	33.3%	
3rd Quartile	28.4%	14.3 %	16.7%	
Highest Quartile	31.3%	14.3 %	5.6%	
Total	100.00%	100.00%	100.00%	(N=99)

Table 44
PERCENT OF ACTIVES, SUCCESSES AND FAILURES FALLING INTO PRE-ALTERNATIVE SCHOOL MATH ACHIEVEMENT QUARTILES

Math Achievement	Actives	Successes	Failures	
Lowest Quartile	10.5%	64.3%	45.0%	
2nd Quartile	20.9%	21.4%	40.0%	
3rd Quartile	34.3%	0.00%	10.0%	
Highest Quartile	34.3%	14.3%	5.0%	
Total	100.00%	100.00%	100.00%	(N=101)

Active students also had received outside psychological treatment at an earlier age (see Table 45; $x^2=7.096$, df 2, $p < .03$) and at an earlier grade (see Table 46; $x^2=6.902$, df 2, $p < .05$).

Table 45
PER CENT OF ACTIVES, SUCCESSES AND FAILURES RECEIVING PSYCHOLOGICAL TREATMENT BEFORE OR AFTER TEN YEARS OF AGE

Age	Actives	Successes	Failures	
5-10 years	56.34%	37.50%	26.09%	
11 years or older	43.66%	62.50%	73.91%	
Total	100.00%	100.00%	100.00%	(N=110)

Table 46
PER CENT OF ACTIVES, SUCCESSES AND FAILURES RECEIVING PSYCHOLOGICAL TREATMENT BEFORE OR AFTER FIFTH GRADE

Grade	Actives	Successes	Failures	
K-5	59.15%	37.50%	30.43%	
6-12	40.85%	62.50%	69.57%	
Total	100.00%	100.00%	100.00%	(N=110)

There is, of course, no simple explanation for these differences. It is possible that certain types of students (e.g. the older students with extremely poor academic skills who have received outside psychological help relatively late in their development) terminate from the program sooner because they either fail or because they do improve but more appropriate settings are identified. The younger, higher achieving child who has received psychological treatment at an earlier age may be more malleable and therefore able to profit from a longer involvement in this particular school setting. It is also possible, of course, that the students who have terminated from the program were also some of the first students to enter. During the initial operation of the school, certain types of students may have been referred and accepted more often than is now currently the case.

With a sample size of only 16 successes and 25 failures, few clear predictors of success would be expected and none were found. In fact, the only variable that seemed to discriminate between these two groups was the number of legal contacts the student had after entering Alternative School (see Table 47). This analysis suggested that the successes had unusually few contacts compared to either actives or failures. However, this difference only approached statistical significant ($x^2=4.537$, df 2, $p<.10$).

Of course, as more students terminate from Alternative School the sample size will increase making the search for predictor variables a more viable project. This can only occur, however, if consistent repeated measures are taken on all students admitted.

Table 47
PER CENT OF ACTIVES, SUCCESSES AND FAILURES HAVING CONTACTS WITH LEGAL AUTHORITIES AFTER ENTRY

Number of Contacts	Actives	Successes	Failures
none	52.56%	81.25%	60.00%
one or more	47.44%	18.75%	40.00%
Total	100.00%	100.00%	100.00%

VII. A NOTE OF CAUTION

The results presented in this report are preliminary in nature and therefore should be viewed with caution. Since multiple analyses were performed, some of the statistically significant findings reported may have occured solely by chance. Only after the results reported here have been replicated, should they be viewed with confidence. Furthermore, all results reported are retrospective and not experimental in nature. And, since no control group comparisons were used, causal relationship should not be assumed. Similarly, statements regarding the relationship between sex, race, marital status of the students' parents, etc. and other variables (e.g. achievement, truancy, suspensions, etc.) are purely associational in nature and do in no way demonstrate causality. In other words, simply because sex or race is significantly related to achievement does not mean that sex or race causes either poor or good achievement. It would be a serious misuse of the findings of this report to conclude that the relationships between any of the variables presented are causal in nature.

VIII. SUMMARY

A preliminary assessment of the characteristics of 119 students who have entered Alternative School prior to June 1977 was carried out. These students were predominantly male and slightly more students were black than white. The family background of the students included a high precentage of divorces and/or parents living apart. Frequently, mothers had sole responsibility for their children; this was particularly true for black students.

Over 75% of the sample had adjustment problems noted by their teachers during or prior to the third grade. However, referrals for psychological services or placement in special education did not usually occur until some years after the child's problems were initially noticed. There was some indication that children of divorced parents had identifiable problems earlier than children of married parents. The types of problems initially identified were most often multiple in nature. However, the marital status of the child's parents seemed to be related to the type of adjustment difficulties the child displayed. Children of married parents, for example, most often showed behavior problems or problems that were multiple in nature. In contrast, children of divorced parents showed more anxious.withdrawn behavior and achievement difficulties as well as multiple problem response patterns.

Intelligence test scores varied widely for the sample as a whole. However, the mean IQ score was in the dull normal range with white students performing significantly better than black students. There appeared to be a small but consistant drop in IQ test scores from the first test a child was given to the last test he received prior to entering Alternative School.

Achievement prior to entry was extremely poor, averaging only .53-.56 grade levels per year. In fact, some 24% of the sample had repeated at least one grade. White students showed greater academic gains than black students; there were no significant differences between males and females.

Behavior ratings made by teachers during school years prior to admission indicated aggressive and distractable behavior to be the most frequent problem areas noted. Children typically had difficulties in more than one problem area and girls showed significantly more shy, withdrawn behavior than boys.

Truancy was a common difficulty prior to entry with significantly more girls noted as truant than boys. The living status of the child's parents was also somewhat related to excessive absenteeism with more children of parents living apart having difficulties in this area.

Well over half of the sample had been suspended at least once prior to admission. Black students were suspended significantly more often than white students. Similarly, children of divorced parents had a higher incidence of suspensions.

Contacts with legal authorities were also quite common. The reasons for these contacts varied but most often involved truancy or assault. More students of divorced parents had such contacts than students of married parents.

Over three-fourths of the entire sample had received some outside psychological help prior to entry. There was some indication that children of parents living apart received this help sooner than the children of parents living together.

After entering Alternative School, dramatic improvement occurred in both reading and math for a small sample of students. Other data suggested that not all students may have made such substantial gains. An alternative explanation was presented suggesting that achievement gains may generally occur but typically begin some 6-7 months after the student enters. The currently available data did not permit an unequivoval discription of the achievement of the sample as a whole. However, the data did suggest that performance at Alternative School was better in math than in reading and that black students continued to perform more poorly that white students.

Behaviorally, students at Alternative School displayed a wide variety of deviant response patterns and most had problems that were multiple in nature. Only three of fifteen behavioral factors were related to the student's sex or race. Data from a small sample of students indicated that the number of deviant behaviors significantly decreased over the course of the student's involvement at Alternative School. However, current records did not permit a clear description of the behavioral improvements of the majority of students in attendance. Suspensions, however, were relatively rare although truancy remained a problem. Some type of contact with legal authorities continued for over 40% of the sample. Preliminarly follow-up data was provided on eleven students who had been successfully terminated from the program.

There were a number of differences between students who were currently in attendance at Alternative School and those who had been terminated either successfully or unsuccessfully. The differences included the grade of entry, the

student's achievement level prior to entry and the age and grade the student first received outside psychological help; actives entered earlier were more academically skilled and had received psychological assistance sooner. No clear predictors of success or failure were found although the number of legal contacts subsequent to entry seemed to be somewhat discriminative in this regard. However, with the sample size of successes and failures so small, few predictors were expected. As more students leave the program more data useful for purposes of prediciton should become available.

All results of this study are prelimary in nature and await replication. The data in its present form do not permit conclusions of a causal nature to be made.

IX. RECOMMENDATIONS

In view of the findings of this report the following recommendations are made:

1. All students admitted to Alternative School should be given achievement testing at the time of entry and thereafter at regular intervals. Where possible, any student terminated from the program prior to a regular testing session, should be tested at the point of termination. Only with this kind of data can clear statements be made as to achievement gains of these students while they are in attendance. Such data would also be useful in assessing which type of student benefits most from this kind of school environment.

2. Along similar lines, behavioral ratings by the child's teacher (and possibly his parents or peers) should be made prior to the student's entry and at regular intervals thereafter. Care should be taken as to which behavioral rating scales are used. Many scales available do not measure what they "say" they measure. Only scales that are reliable and valid as well as offering appropriate normative data should be employed.

3. Consideration should be given to the collection of both achievement and behavioral data in a consistant fashion across all students in all grades throughout the school system. This would make retrospective analyses extremely useful and would permit the development of predictor variables for different treatment programs. While, in some ways, this must be a long term goal, the current yearly achievement testing of all students is an important step in this direction.

4. Further analysis of what are the characteristics of students who ultimately succeed or fail at Alternative School is strongly encouraged. This should be a reasonable undertaking as more students terminate from the program, provided consistant achievement and behavioral records are kept.

5. A more difficult goal is the collection of follow-up data after the student has terminated from the program. Such data is obviously crucial to the assessment of the long term aspects of any treatment program's effectiveness.

6. Preliminary data suggest that Alternative School may be more successful in teaching math than reading. A closer look at the reading program might prove to be worthwhile.

7. One of the most interesting findings of this report was that most students who ultimately attend Alternative School were identified as adjustment problems early in their elementary school years. This suggests that a careful look should be taken at the early detection and treatment of these children. It is possible that the earlier a child is identified and treated the better are his chances for long term success. This, of course, is an empirical question and one that will not be easily resolved. For example, not all students who are problematic in kindergarten or first grade will necessarily end up in special education programs. A detection procedure needs to be developed that accurately discrimates between those children who will "outgrow" their problems and those who will not. Such detection procedures could be developed and would be extremely useful. However, their development would require careful and repeated assessment and follow-up with appropriate replication procedures.

8. None of the available data permit causal interpretations. Consequently, in future evaluations serious consideration should be given to the use of a control group. Although there are a number of appropriate control groups that might be used, a "waiting list" control is one possibility. In this type of evaluation procedure, some students who would normally enter Alternative School are asked to "wait" some period of time (e.g. a year) prior to entry (i.e. remain in their current classroom setting). During this time assessments are made of the progress of students who are attending Alternative School as well as those who are "waiting". If those in attendance improve more, then this improvement can be attributed to the effects of Alternative School rather than some other potentially causal factor (e.g. maturation of the child, changes in his or her home environment, the effects of being identified and repeatedly tested, etc.). Furthermore, when the "waiting" students do finally enter Alternative School further assessments can be made to ascertain pre-post admission improvement. Although such data alone would not be indicative of causality, it can be used to further support the previous findings involving treatment vs. waiting list control comparisons.